



MI Flu Focus

Influenza Surveillance Updates Bureaus of Epidemiology and Laboratories



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Updates of Interest:

- 2015-16 Flu vaccine recs published in MMWR [Aug. 7](#); Michigan versions of VIS also [posted](#).
- MDHHS & MSU's 4th annual Flu Webinar is August 26, 12-1 PM! Registration is **required**; register [here](#).

Influenza Surveillance Report for the Week Ending August 8, 2015

Michigan Disease Surveillance System

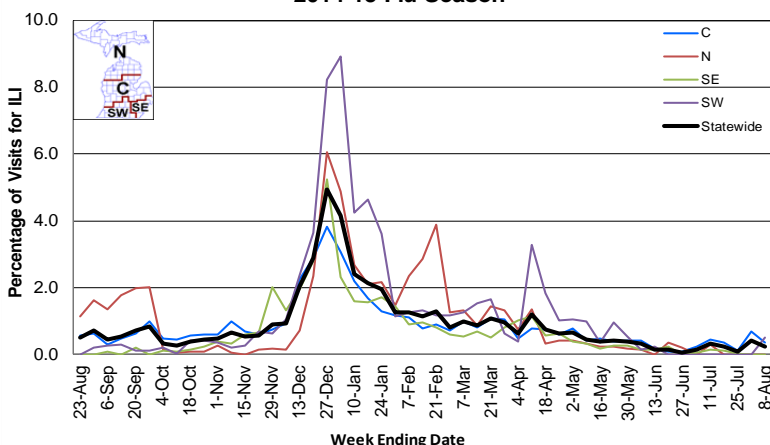
MDSS influenza data indicated that compared to levels from the previous week, aggregate and individual reports decreased slightly. Aggregate reports are slightly higher while individual reports are similar to levels seen during the same time period last year.

Emergency Department Surveillance

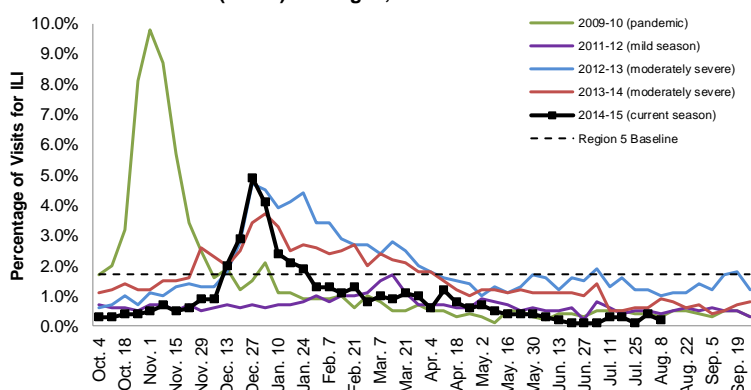
Compared to levels from the week prior, emergency department visits from constitutional complaints decreased slightly while respiratory complaints remained the same. Levels of constitutional complaints and respiratory complaints are lower than levels seen during the same time period last year.

- 4 constitutional alerts (1SW, 3C)
- 2 respiratory alerts (1SW, 1C)

Percentage of Visits for Influenza-like Illness (ILI)
Reported by Sentinel Providers, Statewide and Regions
2014-15 Flu Season



Percentage of Visits for Influenza-like Illness (ILI) Reported by
the US Outpatient Influenza-like Illness Surveillance Network
(ILINet): Michigan, Select Seasons



Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) decreased to 0.2% overall; this is below the regional baseline (1.7%). A total of 18 patient visits due to ILI were reported out of 7,317 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (18 total):

- C (6)
- N (none)
- SE (10)
- SW (2)

Become a Sentinel Provider!

As part of pandemic influenza surveillance, CDC and MDHHS highly encourage year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Stefanie DeVita (devitas1@michigan.gov) for more information.

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Hospital Surveillance

The CDC Influenza Hospitalization Surveillance Project provides population-based rates of hospitalization due to severe influenza illness through active surveillance and chart review of lab-confirmed cases, from Oct. 1, 2014 – Apr. 30, 2015, for Clinton, Eaton, Genesee, and Ingham counties. The cumulative total during the reporting period was 88 pediatric hospitalizations (45.6 per 100,000 population) and 374 adult hospitalizations (54.6 per 100,000) within the catchment area.

The MDHHS Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide, and 9 hospitals (C, SE & SW) reported. Results are listed in the table below. Additional hospitals are welcome to join; please contact Seth Eckel at eckels1@michigan.gov.

Age Group	New Flu Hospitalizations Reported	Total 2014-15 Flu Hospitalizations to Date
0-4 years	0	31 (1N, 21C, 4SE, 5SW)
5-17 years	0	33 (28C, 5SE)
18-49 years	0	68 (2N, 12C, 49SE, 5SW)
50-64 years	0	130 (3N, 14C, 99SE, 14SW)
65 years & older	0	529 (20N, 19C, 435SE, 55SW)
Total	0	791 (26N, 94C, 592SE, 79SW)

Laboratory Surveillance

MDHHS Bureau of Laboratories reported 1 new positive influenza result: 1 A/H3. A total of 566 positive influenza results have been reported for the 2014-15 season. Influenza results for the 2014-15 season are in the table below.

Respiratory Virus	# Positive Respiratory Virus Results by Region				Total	# Specimens Antigenically Characterized	# Tested for Antiviral Resistance
	C	N	SE	SW			# Resistant / Total # Tested
2009 A/H1N1pdm				1	1		
Influenza A/H3	114	34	99	248	495	15* (3 A/Texas/50/2012-like**, 12 A/Switzerland/9715293/2013-like)	0 / 146
Influenza B	20	6	19	23	68	68 (48 B/Yamagata lineage [3* B/Massachusetts/02/2012-like [†] , 9* B/Phuket/3073/2013-like ^{††}], 17 B/Victoria lineage, 3 inconclusive)	
Influenza A, unsubtypeable	1			1	2		

*Specimens antigenically characterized by CDC; **A/Texas/50/2012 (H3N2) virus is the H3N2 component of the 2014-15 Northern Hemisphere flu vaccine, A/Switzerland/9715293/2013-like is an antigenic variant of the current vaccine virus; [†]B/Massachusetts/02/2012 virus is the B/Yamagata component of the 2014-15 Northern Hemisphere trivalent and quadrivalent flu vaccines; ^{††}B/Phuket/3073/2013 virus is the B/Yamagata component of the 2015-16 Northern Hemisphere trivalent and quadrivalent flu vaccines.

In addition, 8 sentinel clinical labs (1SE,2SW,5C) reported influenza results. No labs reported influenza A or B activity. One lab (C) reported sporadic Parainfluenza activity. No labs reported RSV activity. No labs reported Adenovirus activity. No labs reported hMPV activity. Testing volumes continue to be low or very low in all regions.

Influenza Congregate Settings Outbreaks

There were no new facility outbreaks reported to MDHHS. There have been a total of 155 respiratory facility outbreaks reported to MDHHS for the 2014-15 season. Respiratory facility outbreaks are listed in the table below by facility type and surveillance region.

Facility Type	C	N	SE	SW	Total
Adult Care Facility		1	2		3
Long-Term Care / Assisted Living Facility	28	12	36	39	115
K-12 School	1		2		3
Daycare				1	1
Unknown / Investigation Pending	16		4	9	29
Healthcare Facility				3	3
Correctional Facility				1	1
Total	45	13	44	53	155

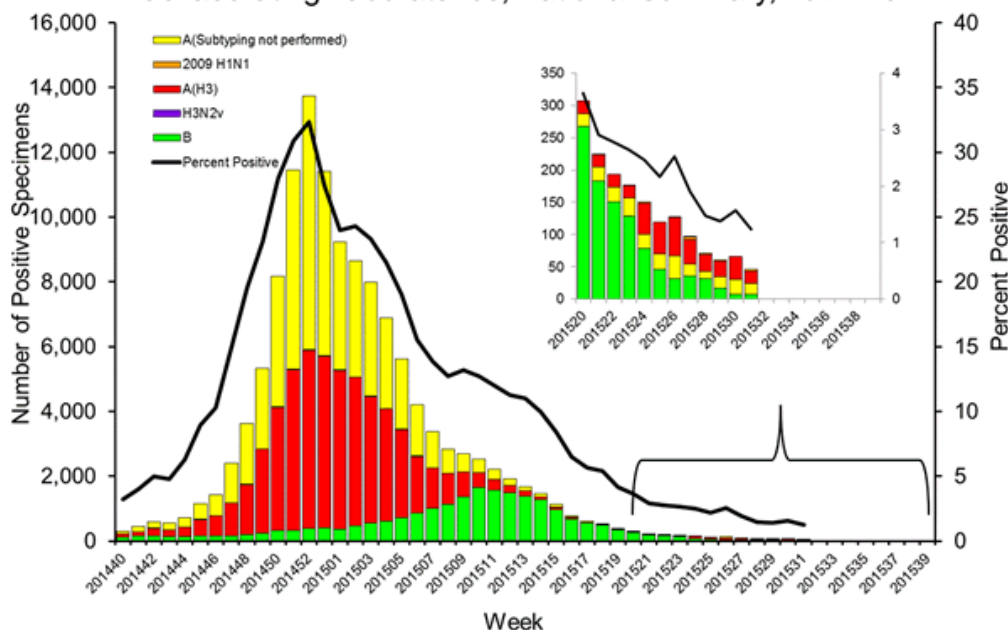
Influenza-associated Pediatric Mortality

No new influenza-associated pediatric deaths were reported to MDHHS. There have been a total of 3 influenza-associated pediatric deaths (1C, 1SE, 1SW) reported to MDHHS for the 2014-15 season.

National: In the United States, 0.6% of outpatient visits were due to influenza-like illness, which is below the national baseline of 2.0%. There have been 145 influenza-associated pediatric deaths reported during the 2014-15 season. Additional information is in the weekly FluView reports available at: www.cdc.gov/flu/weekly/. **NOTE:** Influenza surveillance in the U.S. will continue through the summer months with condensed reports available at www.cdc.gov/flu/weekly/; the full FluView resumes on October 16, 2015. [FluView interactive](#) will be updated over the summer months.

International: Globally, influenza activity remained at low levels in the Northern Hemisphere and increased in some countries in the Southern Hemisphere. Countries in Southern Asia reported elevated but decreasing flu with H3N2 predominating. In South Africa, flu decreased with 2009 H1N1 and H3N2 predominating. In Australia and New Zealand, flu activity increased with H3N2 and flu B viruses circulating. Summary information is available at www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/.

Influenza Positive Tests Reported to CDC by U.S. WHO/NREVSS Collaborating Laboratories, National Summary, 2014-15





2015-16 FLU VACCINE RECOMMENDATIONS

CDC's Advisory Committee on Immunization Practices (ACIP) published the [2015-16 flu vaccine recommendations](#) in *MMWR* on August 7. The report includes the recommendations, antigenic composition for 2015-16, and available flu vaccine products. MDHHS will be updating our flu education materials and will post them [here](#) as they are completed.

The 2015-16 Flu Vaccine Information Statements (VIS) have also been [posted](#). Make sure to use the Michigan versions as they contain language on the Michigan Care Improvement Registry (MCIR).

NAT'L IMMUNIZATION AWARENESS MONTH

It's [National Immunization Awareness Month](#)! Use the [communications toolkit](#) to promote immunizations week by week. Here's what's coming up for NIAM 2015:

- Aug. 16-22: Adults
- Aug. 23-29: Infants and Children

AVIAN INFLUENZA NEWS IN NORTH AMERICA

- [Bird flu cost Iowa economy \\$1.2 billion](#)
- Any reports of sick or dead birds should be forwarded immediately to the proper agency:
 - For domestic poultry, contact MDARD:
 - M-F 8AM-5PM, 1-800-292-3939
 - After hours/weekends, 517-373-0440
 - For wildlife (die-off of waterfowl, gulls, or shorebirds), contact DNR:
 - M-F 8AM-5PM, 517-336-5030
 - After hours/weekends, 1-800-292-7800

AVIAN INFLUENZA A(H7N9) NEWS

- *Emerging Infectious Diseases*: [Third wave of influenza A\(H7N9\) virus from poultry, Guangdong Province, China, 2014-2015](#)
 - 14 viruses isolated from poultry and environment in live poultry markets, all 14 descended from viruses of the 2nd wave of H7N9 infections during 2013

FLU WEBSITES

www.michigan.gov/flu
www.cdc.gov/flu
www.flu.gov
<http://vaccine.healthmap.org/>

Archived editions of FluBytes are available [here](#) and MI FluFocus archives are [here](#).

INFLUENZA-RELATED JOURNAL ARTICLES

- *Infection Control & Hospital Epidemiology*: [Severe influenza in 33 US hospitals, 2013-2014: complications and risk factors for death in 507 patients](#)
 - Risk factors included age >65 years, being male, and history of cancer with chemo administered within prior 6 months
 - Risk factors shifted in first post- 2009 pandemic season that H1N1 predominated toward those of more typical flu season
- [Pregnancy-related mortality resulting from influenza in the U.S. during the 2009-2010 pandemic](#)
 - 12% of pregnancy-related deaths were attributed to 2009 H1N1 infection
 - Pregnancy-related mortality ratio was 2.2 per 100,000 live births
 - Peak of deaths occurred in October 2009
- [Novel human-like influenza A viruses circulate in swine in Mexico and Chile](#)
 - At least 12 genetically distinct hemagglutinin lineages circulate in Latin American swine herds, only 2 of which have been found in North American swine
- *Emerging Infectious Diseases*: [Socioeconomic disparities and influenza hospitalizations, Tennessee, USA](#)
 - Flu hospitalizations in neighborhoods decreased with increased percent college educated, percent employed, and had health insurance
- *Vaccine*: [Efficacy and immunogenicity of high-dose influenza vaccine in older adults by age, comorbidities, and frailty](#)
 - Relative efficacy estimates favored high-dose (HD) over standard-dose (SD)
 - No significant evidence that baseline age, comorbidity, or frailty modified efficacy of HD relative to SD
- [Serologic evidence of influenza A\(H14\) virus introduction into North America](#)

OTHER INFLUENZA-RELATED NEWS

- [China, Ghana, and Mexico report more avian influenza outbreaks](#)
- [Nigeria, Russia, Vietnam, and Taiwan report new high path avian influenza outbreaks](#)
- [More cases of dog flu confirmed in Cincinnati](#)

For questions or to be added to the distribution list, please contact Stefanie DeVita at devitas1@michigan.gov.

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